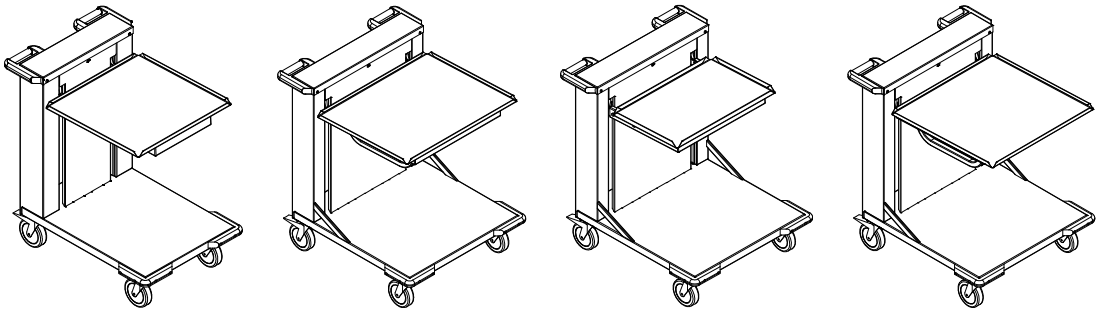
HUPFER®

Operating Instructions



Open basket dispenser

OKO/50-50 | OKO/65-53 | OKO/61-41 ISO/SPRI | OKO/61-61 STE

4330022_A1

1 Introduction

1.1 Appliance Information

Appliance designation	Open basket dispenser
Appliance type/ -s	OKO/50-50 | OKO/65-53 | OKO/61-41 ISO/SPRI | OKO/61-61 STE
Hersteller	HUPFER® Metallwerke GmbH & Co. KG Dieselstraße 20 48653 Coesfeld PO 1463 48634 Coesfeld ☏ +49 2541 805-0 🖷 +49 2541 805-111 www.hupfer.de info@hupfer.de

Read these operating instructions thoroughly to ensure safe operation and avoid any damages before the first operation.

Ensure that sources of danger and possible faulty operations have been pointed out to the operating staff.

Subject to modifications

The products covered by these operating instructions have been developed taking into consideration the requirements of the market and the latest technology. HUPFER® reserves the right to modify the products and appertaining technical documentation in so far as the modifications are in the name of technological progress. The data and weights as well as the description of performance and functions assured in the order confirmation as binding are always decisive.

Manual edition

4330022_A1

1.2 Table of Contents

1.3 List of Abbreviations

Abbreviation	Definition
BGR	Rule of the Professional Association
BGV	Regulation of the Professional Association
CE	Communauté Européenee European Community
DIN	Deutsches Institut für Normung German Institute for Standardisation, technical regulations and technical specifications
EC	European Community European Union
EN	European Standard Harmonised standard for the EU market
E/V	Spare and wearing part
IP	International Protection. The abbreviation IP and a further two-digit index specify the protection class of a housing.

The first digit: Protection against ingress of solid foreign objects

0	No protection against contact, no protection against ingress of solid foreign objects
1	Protection against contact with any large surface of the body such as the hand, protection against ingress of foreign objects ∅>1.97" (50 mm)
2	Protection against contact with the fingers, protection against ingress of foreign objects ∅□>0.47" (12 mm)
3	Protection against contact with tools, thick wires or similar objects of ∅>0.01" (2.5 mm) protection against foreign objects ∅□>0.01" (2.5 mm)
4	Protection against contact with tools, thick wires or similar objects of ∅□>0.04" (1 mm), protection against foreign objects ∅>0.04" (1 mm)
5	Protection against contact, protection against dust deposits inside
6	Complete protection against contact, protection against ingress of dust

The second digit: Protection against ingress of water

0	No protection against ingress of water
1	Protection against vertically falling water drops
2	Protection against dripping water (at any angle up to 15° from the vertical)
3	Protection against water drips at any angle up to 60° from the vertical
4	Protection against water splashing from any direction
5	Protection against water jets (projected by a nozzle) at any angle
6	Protection against rough sea or strong water jets (flood protection)
7	Protection against ingress of water during temporary immersion
8	Protection against pressurised water during continuous immersion

LED	Light Emitting Diode Light diode
RCD	Residual current device (RCD) In the EU the English RCD (Residual Current Device) term is customary in standardisation matters.

1.4 Definitions of Terms

Term	Definition
Authorised specialist	An authorised specialist is a specialist that has been trained by the manufacturer, an authorised service dealer or a company assigned by the manufacturer.
Cook&Chill-Kitchens	"Cook and Chill": Kitchens where warm food after being cooked is chilled as quickly as possible.
Cook&Serve-Kitchens	"Cook and Serve": Kitchens where warm food is served immediately after being cooked or kept warm until it is consumed.
Element formation	Also: contact corrosion. Occurs when different noble metals are in close contact with each other. This happens when a corrosive medium is between both metals, as for example water or even air humidity.
Specialist	A specialist is a person who can evaluate work assigned and can individually recognise any possible dangers due to the professional training, specialist knowledge and experience as well as knowledge of the respective guidelines.
Gastronorm	Gastronorm is a measurement system applied worldwide, for instance, in food processing plants or large-scale kitchens . The use of standardised sizes makes possible to exchange food pans. The basic size of the gastronorm (GN) 1/1 is 12.8×20.9" (325×530mm). Items are available in different depths.
H1	Hygienic standard (NSF/USDA) for lubricants that are suitable for incidental and technically unavoidable contact with foodstuffs
Lift	A movement, for example a vertical movement of the stacking platform from bottom to top.
Control	Compare with certain conditions and/or characteristics such as damages, leaks, filling levels, heat.
Convection	Physical properties or mass transfer (e.g. heat or cold) through currents in gases and liquids.
Corrosion	The chemical reaction of a metallic material with its surroundings, e.g. rust.
Machine safety	The term of machine safety means all the measures used to avert injury to persons. The basis for this are national as well as EC-wide valid directives and laws for protecting users of technical devices and systems.
Passive layer	A non-metallic protective layer on a metallic material that prevents or slows down material corrosion.
Check	Compare with certain values such as weight, torque, content, temperature.
Qualified person, qualified staff	Qualified personnel are persons who due to their professional training, experience and instruction as well as their knowledge of the respective standards, guidelines, accident prevention regulations and operating conditions have been authorised by a person responsible for system safety to carry out required activities and can recognise and prevent any possible danger (definition of specialists according to IEC 364).
Schuko®	The abbreviation of the German term "Protective contact" that indicates a system of domestic plugs and sockets equipped with protective earthed contacts used in most of Europe.
Instructed persons	An instructed person is a person who has been instructed on the possible risks resulting from improper behaviour when carrying out the assigned task as well as on the necessary protective equipment and protective measures and trained for this task if necessary.

1.5 Orientation Guide

The front

"The front" means the side where the push bars are arranged. The operating staff stays at this side to move the open basket dispenser.

The rear

The side named "the rear" means the opposite side of the front side (the front).

The right

The side named "the right" means the side at the right hand side of the front side (the front).

The left

The side named "the left" means the side at the left hand side of the front side (the front).

1.6 Notes on Use of Manual

1.6.1 Notes on the manual structure

This manual is structured in functional and task orientated chapters.

1.6.2 Notes and their illustrations used in the chapters

DANGER	Brief description of danger
	There is an imminent danger to life and limb of the user and / or third parties when the instructions are not followed precisely or the circumstances described are not taken into account. The type of danger is indicated by a symbol and explained in the accompanying text in more detail. In this example the general sign of danger is used.

WARNING	Brief description of danger
	There is an indirect danger to life and limb of the user and / or third parties when the instructions are not followed precisely or the circumstances described are not taken into account. The type of danger is indicated by a symbol and explained in the accompanying text in more detail. In this example the general sign of danger is used.

ATTENTION	Brief description of danger
	There is a potential risk of injury or damage to property when the instructions are not followed precisely or the circumstances described are not taken into account. The type of danger is indicated by a general sign and explained in the accompanying text in more detail. In this example the general sign of danger is used.

NOTE	Brief description of additional information
	Attention is pointed to special conditions or additional important information on the respective subject.

INFO	Short title
	Contains additional information on work assisting features or recommendations on the respective subject.

2 Safety Instructions

2.1 Introduction

The chapter on safety instructions describes the risks associated with the appliance in terms of product liability (according to the EU Directive).

The safety instructions should warn of hazards and help to avoid damages to persons, the environment and property. Please make sure that you have read and understood all the safety instructions given in this chapter.

You must comply with the respectively valid national and international Safety at Work Regulations. The manager is responsible for the valid regulations he/she has to provide. He/she must acquaint himself/herself and the operator with the new regulations.

In addition to these operating instructions, comply with the rules on health and safety at work issued by the Main Association of the industrial Professional Associations, especially with those that concern the handling of hot items and risks involved (BGR 110 "Protection of health and safety at work in restaurants" and BGR 111 "Protection of health and safety at work in large-scale kitchens").

2.2 Warning Symbols Used

Symbols are used in these operating instructions to point out the dangers that can occur while operating or cleaning the appliance. In both cases, the symbol provides information on the type and circumstances of danger.

The following symbols can be used:

	General hazardous area
	Risk of hand injuries
	Risk of crushing

2.3 Safety Instructions for Appliance Safety

Safe operation of the appliance depends on appropriate and thorough use. Negligent handling of the appliance can lead to danger to life and limb of the user and / or third parties as well as hazards to the appliance itself and the other operator's property.

The following points are to be observed to ensure the appliance safety:

- The appliance may only be operated when it is in perfect condition with regards to technical standards.
- All the operating and actuating elements must be in a perfect and functionally reliable condition with regards to technical standards.
- Modifications or retrofits of the equipment are only permitted in consultation with the manufacturer and on receipt of his written agreement.
- In no case may people sit or stand on the appliance. Transport of persons is not permitted.
- Empty baskets can be stacked up on the base plate when the appliance is stopped and the total brakes are applied. When moving the basket dispenser, the baskets need to be replaced on the stacking platform, otherwise they can slide in case of a sudden braking.
- The paths of the outrigger may not be blocked.
- Use only suitable baskets for the respective stacking platform. The baskets always have to be laid up within the edge on the stacking platform.

- The appliances are designed only for manual transport. Transport using any kind of devices is not permitted. Risk of injury and damage.
- Release both total brakes before commencing transporting. Moving the appliance with the total brakes locked can damage the chassis.
- Transport should only be undertaken over level floors. Moving the appliance over very uneven floors can damage the chassis.
- Transport over inclined planes or steps is not permitted.
- When approaching walls and moving round obstacles always pay attention to persons in the way. Risk of injury.
- When transporting the appliance, always hold both handles with your hands. Never let go of the appliance while moving it.
- When transporting the appliance, do not move it faster than a walking pace. Heavily laden basket dispensers are difficult to brake and steer. If necessary, ask for assistance when transporting the appliance.
- If the basket dispenser tips over due to outside influences or inattention, never catch it manually. Risk of injury.
- Do not stop the appliance on sloping floors.
- After stopping, the appliance should be secured against rolling away by means of both total brakes being applied.
- In the case of off-site transport in a vehicle such as a lorry, the appliances should be secured properly. The total brakes are not sufficient as a transport securing method.
- A temporary storage lasting longer than three months must take place in a dry and frost-free environment. The appliance must be kept covered with a suitable covering material to be protected against dust ingress.
- It is not allowed to manually push down the stacking platform or the stacked crockery baskets (e.g. for cleaning). There is a risk of injury when released.
- Before loading, the dispensing height of the OKO/50-50 or OKO/65-53 open basket dispensers need to be adjusted to the kind of crockery and the used crockery basket (3" (75 mm) or 4 1/2" (115 mm)).
- To avoid hand injuries, care should always be taken at open basket dispensers of the type OKO/50-50 or OKO/65-53 to ensure that the upper edge of the uppermost crockery basket is at least 1.38" (35 mm) above the upper edge of the housing.

2.4 Safety Instructions for Cleaning and Care

The following points shall be observed when carrying out any cleaning and maintenance operations:

- For reasons of hygiene the cleaning instructions shall be strictly observed.
- Do not clean the appliance with steam-jet or high-pressure washers.

2.5 Safety Instructions for Troubleshooting

The following points shall be observed when carrying out any maintenance and troubleshooting operations:

- All troubleshooting work should only be carried out by authorised specialists.
- Defective components should only be replaced with original parts.
- The local applicable Accident Prevention Regulations must be observed.

3 Description and Technical Data

3.1 Performance Description

Open basket dispensers which are intended for the use in the food service industry and large-scale catering establishments are used for efficient transport and storage of crockery items in baskets.

These appliances are especially suitable for small and badly stackable crockery items of any type, e.g. cups, mugs, small side dish bowls and all-purpose bowls and plastic covers, saucers, egg cups, pots and for long and narrow set platters. Open basket dispensers are suitable for standard dishwasher baskets of plastic or for plastic-coated or electropolished stainless steel stacking baskets.

In contrary to the closed basket dispensers, the filling of the open basket dispenser is always visible. Empty baskets can be placed on the base plate after removal of the crockery, an additional storing surface is not needed. Baskets filled with crockery items can be stacked on the open stacking platform after the rinsing process, any residual moisture evaporates easily due to better ventilation, and the crockery items cool down quickly.

Open basket dispensers that are designed for the logistic of sterile equipment can be used for storage and transport of empty sterile equipment.

3.2 Intended Use

Basket dispensers of the type OKO OKO/50-50 or OKO/65-53 are designed only for the transport and storage of clean crockery items made of porcelain or toughened glass. Transport of other loads is not permitted.

Basket dispensers of the type OKO/61-41 ISO / SPRI or OKO/61-61 STE are designed only for the transport and storage of baskets for sterile equipment. Transport of other loads is not permitted.

Use only suitable baskets for the respective stacking platform. The baskets always have to be laid up within the edge on the stacking platform. Do not transport big baskets with basket dispensers which are intended for small baskets. Also do not transport small baskets with basket dispensers which are intended for bigger baskets. The baskets could slide in case of a sudden braking.

Stopped basket dispensers may also store baskets below the stacking platform on the base plate.

The intended use means the predetermined procedures, compliance with the indicated specifications and use of the delivered or additionally available original accessories.

Any other use of the appliance is considered as unintended use.

3.3 Improper Use

It is not permitted to load the basket dispenser with other loads as given.

When moving the basket dispenser, no baskets may be stored on the base plate.

In no case may people sit or stand on the appliance.

Transport of persons is not permitted.

No liability is assumed and no warranty claims can be submitted for damages caused by improper use.

3.4 Appliance Description

3.4.1 View of the appliance OKO/50-50

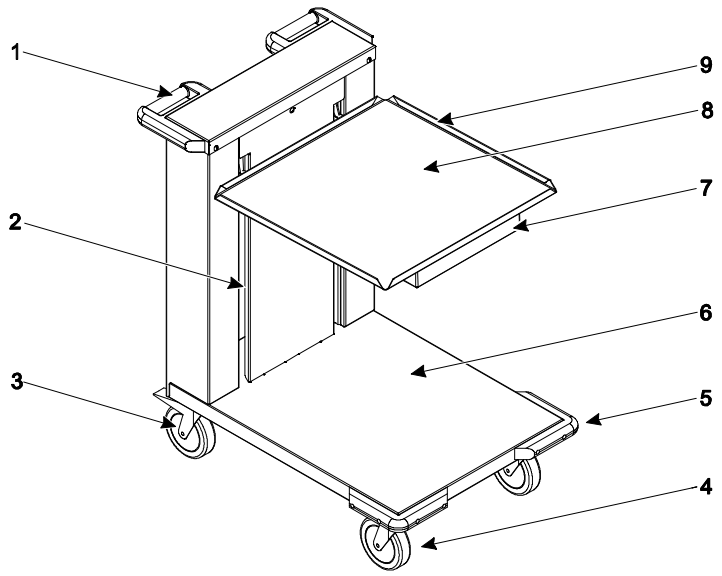


Figure 1 View of the appliance OKO/50-50

1	Safety push bars	6	Base plate
2	Paths of the outrigger	7	Platform outrigger
3	Swivel casters with total brakes	8	Stacking platform
4	Swivel casters without total brakes	9	Edge of the stacking platform
5	Bumper		

3.4.2 View of the appliance OKO/61-41 ISO/SPRI

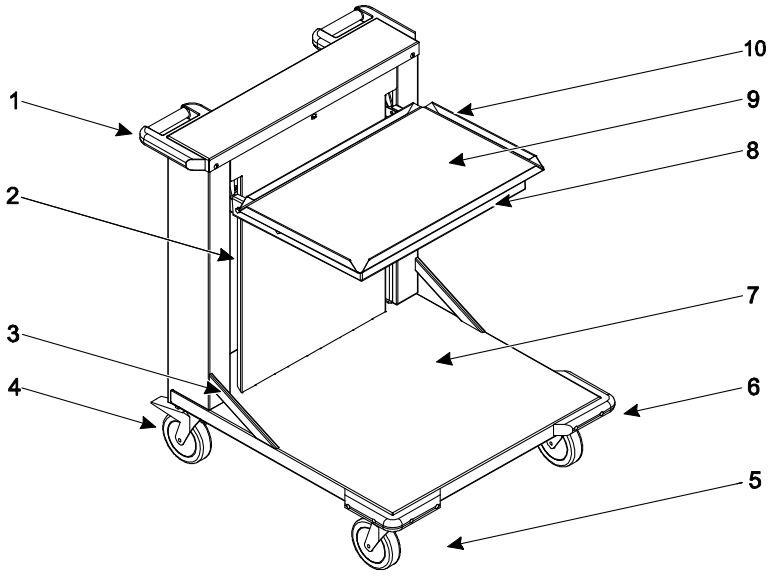


Figure 2 View of the appliance OKO/61-41ISO/SPRI

1	Safety push bars	6	Bumper
2	Paths of the outrigger	7	Base plate
3	Strut	8	Platform outrigger
4	Swivel casters with total brakes	9	Stacking platform
5	Swivel casters without total brakes	10	Edge of the stacking platform

3.4.3 Appliance Description

Open basket dispensers are mobile appliances with a spring-loaded stacking platform. Due to loads, such as stacked crockery baskets, the stacking platform is lowered. The stacking platform goes up when loads are removed.

Ergonomically shaped push bars with an integrated bumper protect against injuries to the hands and damage to the appliance. Two corner bumpers offer optimal collision protection in the travel direction. Together with both push bars an all-side protection against damages is guaranteed.

Depending on the model, open basket dispensers are designed for different purposes of use.
OKO/50-50 and OKO/65-53 are unheated and without a cooling device. They can be used for stacking saucers, coffee cups, mugs, eggcups, long narrow set plates and plastic covers in baskets.

Basket dispensers from large-scale kitchens accommodate poorly stackable crockery items made of porcelain, toughened glass or plastic in stackable baskets. Crockery baskets are available in two heights (3.0" (75 mm) and 4.5" (115 mm)). The kind of crockery basket used for the further stacking depends on the crockery used. In general, higher capacities are achieved with the 4 1/4" (115 mm) baskets. The crockery items are always at hand at the required dispensing height.

Basket dispensers of the type OKO/61-41 ISO/SPRI and OKO/61-61 STE that are designed for the logistic of sterile equipment can be used for storage and transport of empty sterile equipment.

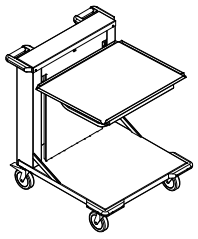
3.4.4 Optional accessories

The following parts can be applied as optional accessories for the basket dispenser:

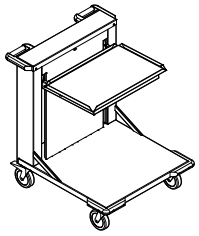
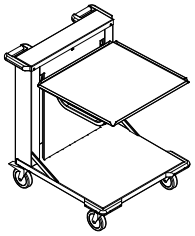
- Crockery basket 19.7 x 19.7 x3.0" or 19.7 x 19.7x 4.5 " (500 x 500 x 75 mm or 500 x 500 x 115 mm) (plastic-coated or electropolished stainless steel)
- Crockery basket 25.6 x 20.9 x 3.0" or 25.6 x 20.9 x 4.5" (650 x 530 x 75 mm or 650 x 530 x 115 mm) (plastic-coated or electropolished stainless steel)
- Baskets for sterile equipment in different formats
- Peripheral bumpers are made of impact-resistant plastic
- Swivel casters made of stainless steel, Ø 4.9" (125 mm) with or without total brakes, plate attachment

Further information about baskets for sterile equipment can be found on our homepage at www.hupfer.de. The part numbers of the special accessories can be found in the spare parts catalogue and order lists available online.

3.5 Technical Data

	Dim.	OKO/50-50	OKO/65-53
			
		open basket dispenser for large-scale kitchens	open basket dispenser for large-scale kitchens
Own weight	lbs (kg)	105.8" (48)	121.3" (55)
Payload	lbs (kg)	264.6" (120)	374.8" (170)
Permitted total weight	lbs (kg)	370.4" (168)	496" (225)
Overall dimensions w x d x h	in (mm)	22.2 x 31.5 x 35.4" (565 x 800 x 900)	28.2 x 31.5 x 35.4" (715 x 800 x 900)

	Dim.	OKO/50-50	OKO/65-53
Chassis	in (mm)	4 swivel casters, 2 with total brakes, Ø 4.9" (125)	4 swivel casters, 2 with total brakes, Ø 4.9" (125)
Stacking platform		Stainless steel platform, all-side upstand	Stainless steel platform, all-side upstand
Dimensions of the stacking platform	in (mm)	20.6 x 20.6" (523 x 523)	25.6 x 20.9" (650 x 530)
Dimensions of usable crockery baskets	in (mm)	19.7 x 19.7" (500 x 500)	25.6 x 20.9" (650 x 530)
Stack height	in (mm)	approx. 29.5" (approx. 750)	approx. 29.5" (approx. 750)
Capacity		6 baskets 4.5" (115 mm) high / 10 baskets 3.0" (75 mm) high	6 baskets 4.5" (115 mm) high / 10 baskets 3.0" (75 mm) high

	Dim.	OKO 61-41 ISO/SPRI	OKO 61-61 STE
			
		open basket dispenser for use in medical industries	open basket dispenser for use in medical industries
Own weight	lbs (kg)	99.2" (45)	105.8" (48)
Payload	lbs (kg)	275.6" (125)	313.1" (142)
Permitted total weight	lbs (kg)	374.8" (170)	418.9" (190)
Overall dimensions w x d x h	in (mm)	28.2 x 32.6 x 35.4" (715 x 829 x 900)	28.2 x 32.6 x 35.4" (715 x 829 x 900)
Chassis	in (mm)	4 swivel casters, 2 with total brakes, Ø4.9" (125)	4 swivel casters, 2 with total brakes, Ø4.9" (125)
Stacking platform		Stainless steel platform, all-side upstand	Stainless steel platform, all-side upstand
Dimensions of the stacking platform	in (mm)	24.0 x 16.1" (610 x 410)	24.0 x 24.0" (610 x 610)
Dimensions of usable baskets for sterile equipment	in (mm)	23.62 x 15.75" (600 x 400)	23.6 x 11.8" (2 per stacking platform) (600 x 300) (2 per stacking platform)
Capacity	in (mm)	20 baskets 3.9" (100 mm) high	2 x 20 baskets 5.4" (138 mm) high

The corresponding test marks can be found on our homepage at www.hupfer.de.

3.6 Rating Plate

The rating plate is on the rear of the appliance.

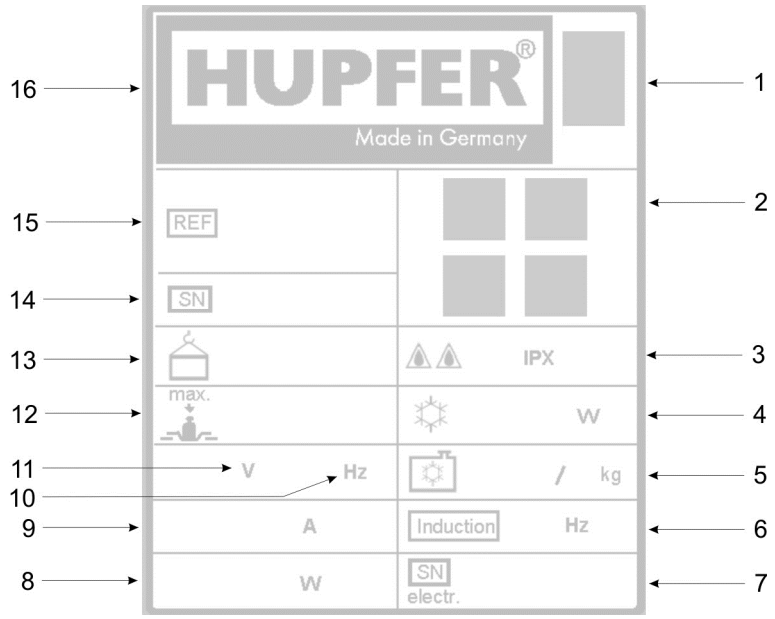


Figure 3 Rating plate

1	Disposal of old appliances	9	Nominal current
2	Test mark	10	Frequency
3	Protection class	11	Nominal voltage
4	Chilling capacity	12	Payload
5	Coolant	13	Own weight
6	Induction frequency	14	Serial number/Order number
7	Current serial number	15	Item and brief description
8	Power	16	Manufacturer

4 Transport, Putting into Operation and Decommissioning

4.1 Transport

ATTENTION	Appliance damages caused by improper transport
	In the case of off-site transport in a vehicle such as a lorry, the appliances should be secured properly. The total brakes are not sufficient as a transport securing method. If the appliances are not secured properly, there is a risk of damage to property and persons caused by squashing. During transport, secure all the individually standing appliances using corresponding transport securing devices.

4.2 Putting into Operation

Before the first use of the open basket dispenser, the protective plastic film has to be removed from the metal plates.

INFO	Disposal of packing material
	The packing consists of recyclable materials and can be disposed of appropriately. Thereby, the different materials are to be separated and disposed in an environmentally compatible manner. In any case, the local bodies responsible for disposal are to be involved for this purpose.

Before putting the appliance into operation, it is necessary to check whether the total brakes function properly.

Before the appliance is put into operation it must be clean and dry.

4.3 Storage and Recycling

Temporary storage must take place in a dry and frost-free environment. The basket dispenser must be kept covered with a suitable covering material to be protected against dust ingress.

The basket dispenser kept in the storage location must be checked for damages and corrosion every 6 months.

NOTE	Condensed water formation
	Ensure that there is sufficient ventilation and no large temperature fluctuations in the storage location to avoid condensed water formation.

Before the appliance is taken back into operation it must be clean and dry.

If the basket dispenser is required to be recycled, all the heating devices (if available) must be removed safely and completely, the recyclable materials must be separated properly and disposed in an environmentally compatible manner according to the Waste Disposal Regulations. In any case, the local bodies responsible for disposal are to be involved for this purpose.

5 Operation

5.1 Settings

Since the basket dispensers are designed for a maximum load, the available spring system of the appliances is entirely sufficient for all purposes.

It is only necessary to adjust basket dispensers, which are intended for the transport of crockery baskets, when the total crockery weight stored in the basket or the basket height alters.

The dispensing height is adjusted by hooking or unhooking tension springs. If the existing spring sets are insufficient, additional springs must be added.

NOTE	Spring adjustment
	The springs must be adjusted so that the upper rim of the uppermost basket remains at a uniform dispensing height between 1.38 and 1.87 " (35 and 50 mm) above the upper rim of the housing over the entire lift

5.1.1 Adjust springs

Step 1: Check the adjustment of the springs

- Place two filled baskets on the stacking platform to test the dispensing height.
- Wait for a reaction.

If the upper edge of the uppermost basket is between 1.38 and 1.87 " (35 and 50 mm) above the upper edge of the spring case, the spring system is adjusted correctly.

If the column drops down only a little or not at all, the dispensing height must be altered by adjusting the springs.

If the dispensing height is too high, adjustable springs must be unhooked.

If the dispensing height is too low, adjustable springs must be added.

Step 2: Change the adjustment of the springs

The dispensing height is adjusted or changed by hooking or unhooking the tension springs on two attachment bars within the spring case.

The springs in the 50-50 basket dispensers are arranged in groups of 5: There are 4 base springs with higher tension (1) and 1 adjustable spring with lower tension (2).

The springs in the 65-53 basket dispensers are arranged in groups of 8: 6 are base springs with higher tension (1) and 2 are adjustable springs (2) with lower tension.

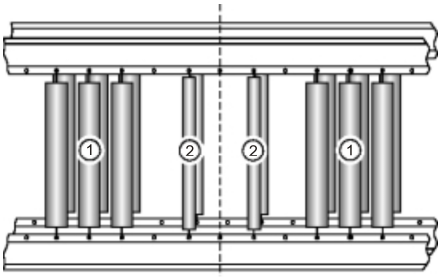


Figure 4 Attachment bar with tension springs (OKO/65-53)

NOTE	Arrangement of the springs
	The arrangement of the springs must be symmetrical on the left and right within the attachment bar, so that it is ensured, that the stacking platform is guided uniformly and without friction.

Procedure for setting the springs:

ATTENTION	Risk of injury
	Be careful when hooking and unhooking the springs. When adjusting springs on sharp edges, pay particular attention to the ends of the tension springs.

INFO	Required tools
	You need the following tools for screwing the cover of the spring case: 1 Screwdriver (chisel width 0.24-0.28'' (6-7 mm) and thickness 0.03–0.04 '' (0.8–1.0 mm))

- Remove the baskets from the stacking platform.
- In order to remove the cover of the spring case, release the three screws (1) on the side and the screw between the push bars (2) with a screwdriver.

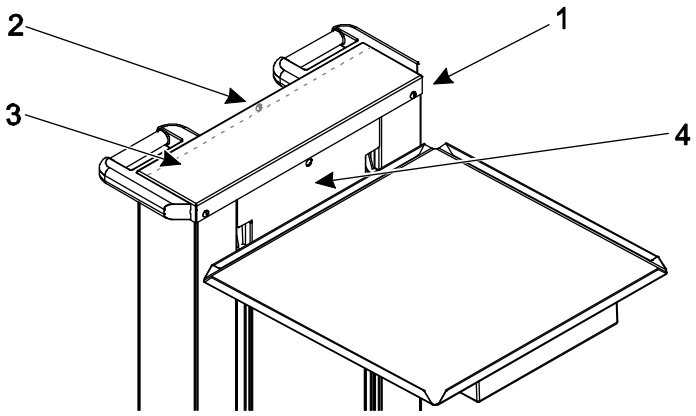


Figure 5 Adjust springs

- Remove the cover of the spring case (3). The push bars are bolted with the cover of the spring case.
- Carefully lift the panel between the stacking platform and spring case, then tilt it slightly down into the spring case, pull it out and put it aside. Now the springs are accessible.
- Hook or unhook adjustable springs uniformly in all groups of springs. Preferably unhook the adjustable springs. Always leave the base springs inserted, if possible. Always unhook the springs on the lower attachment bar.
- Repeat both steps 1 'Checking the spring adjustment' and 'Altering the spring adjustment' until the upper edge of the upper crockery basket is between 1.38 to 1.97 '' (35 to 50 mm) above the upper edge of the spring case.
- After the dispensing height is correctly adjusted, insert the panel of the spring case. Take care that the panel is in front of the edge of the base plate.
- Put the cover of the spring case back on and screw it tight.

5.1.2 Choice of Baskets

There are two different types of baskets with different heights available for the models OKO/50-50 and OKO/65-53. The kind of baskets used for further stacking depends on the crockery that should be loaded into the crockery baskets.

In general, higher capacities are achieved with the 4.53" (115 mm) baskets. Covered crockery with portioned food and total height between 2.17'' (55 mm) and 2.56'' (65 mm) is an exception to this.

	Kind of basket	Basket height	Useful height
OKO/50-50 OKO/65-53	2.95" (75er) basket	2.95'' (75 mm)	2.56'' (65 mm)
	4.53" (115er) basket	4.53'' (115 mm)	4.13'' (105 mm)

There are baskets for sterile equipment and ISO standard containers available in various formats and heights for the models OKO/61-41 ISO/SPRI and OKO/61-61 STE.

5.1.3 Calculating the capacity for the models OKO/50-50 and OKO/61-53

The total capacity of a basket dispenser depends on the crockery items loaded and the number of crockery baskets.

All the leading manufacturers give the necessary data for calculating the intermediate stack height in the following manner:

$$H_Z = \frac{(H_n - H_1)}{n-1}$$

H_Z: Intermediate stack height
H_1: Height of the first crockery item
H_n: Height of n crockery items
n: Number of crockery items

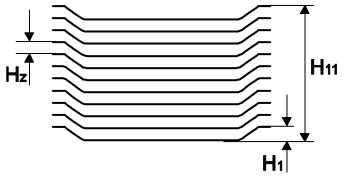


Figure 6 Intermediate stack height H_z of 11 crockery items

Example:

$$H_Z = \frac{(165 - 40)}{11-1} = 12{,}5 \text{ mm}$$

H_Z: Intermediate stack height
H_1: Height of the first crockery item = 1.57'' (40 mm)
H_{11}: Height of 11 crockery items = 6.5'' (165 mm)

The capacity per crockery stack can be calculated together with the stack height H_S of the basket dispenser:

$$K = \frac{(H_S - H_1)}{H_Z} + 1$$

K: Capacity
H_S: Stack height of the basket
H_1: Height of the first crockery item
H_Z: Intermediate stack height

Example:

Capacity of 4.53'' (115 mm) crockery basket:

$$K = \frac{(110 - 40)}{12{,}5} + 1 = 6{,}6$$

H_S: Stack height of 4.53" (115 mm) crockery basket = 4.33'' (110 mm)
H_1: Height of the first crockery item = 1.57'' (40 mm)
H_Z: Intermediate stack height = 0.49'' (12,5 mm)

A 4.53" (115 mm) crockery basket can accommodate 6 crockery items placed upon each other per crockery stack. 6 crockery stacks fit into this crockery basket. Consequently, there can be loaded 36 items.

Basket dispenser total capacity:

The total capacity is calculated from the capacity of the inserted baskets.

Therefore, when six 4.53" (115 mm) baskets are used, the total capacity is 252 crockery items (54 items in the base basket and 6 x 36 items in 6 crockery baskets).

5.2 Operation

Before the appliance is put into operation it must be clean and dry.

Before work starts, it is always necessary to check whether the open basket dispenser is adjusted correctly for the purpose.

The correct dispensing height must be ensured, so that the staff cannot suffer injury or become trapped.

Loading the appliance

Generally, already filled baskets are loaded on the stacking platform.

ATTENTION	Breakage of crockery
	Crockery baskets may be filled up to about 0.12" to 0.20" (3 to 5 mm) below the upper rim, otherwise this can cause breakage of crockery.

Unloading the appliance

- Remove the items from the baskets or the baskets evenly from each stack to avoid tilting of the stacking platform.
- Remove empty baskets from the stacking platform and stack them in a suitable place.
  Stopped basket dispensers may also store empty baskets on the base plate.

Moving the appliance

- Place the baskets from the base plate on the stacking platform.

ATTENTION	Slip danger
	Baskets that are left on the base plate when moving the appliance can slide in case of a sudden braking. Put empty baskets back on the stacking platform when you move the appliance.

- Release both total brakes.
- Grip the appliance by the push bars and move it to the destination.
- At the destination, apply both total brakes in order to secure the appliance against movement.

5.3 Measures at the End of Operation

- At the destination, apply both total brakes in order to secure the appliance against movement.

6 Fault Detection and Troubleshooting

6.1 Notes on Troubleshooting

Service work should only be carried out by authorised specialist staff. In the event of after-sales service and when ordering spare parts specify the data given in the rating plate.

Defective components should only be replaced with original parts.

Regular inspection and maintenance of the appliance prevent disruptions to operation and ensure safety. Inspection and maintenance intervals depend on the use of the appliance. Consult your dealer's after-sales service department.

6.2 Fault and Action Table

Fault	Possible cause	Action
The basket dispenser pulls to the right or to the left when transporting	Damaged caster bearings	Replace defective casters
Resistance of the casters is higher than when putting the appliance into operation	Damaged caster bearings	Replace defective casters
Total brakes do not have any locking action	Locking brakes are worn	Either renew the locking brakes or replace the defective casters.
The stacking platform does not go up even when the load is low	Spring breakage	Open the spring case and replace defective springs.
The stacking platform has space	The screws on the platform outriggers or the outriggers are loose.	Check the screws and tighten them if needed

7 Cleaning and Care

7.1 Security Measures

ATTENTION	Do not clean with running water
	The appliance should not be cleaned with running water, steam-jet or high-pressure washers. Water can accumulate in the appliance. Clean the open basket dispenser with a damp cloth and usual cleaning agents.

7.2 Hygiene Measures

The correct behaviour of the operating staff is decisive for optimal hygiene.

All persons must be informed about the locally valid hygiene regulations, observe them and comply with them.

Stick a waterproof plaster to cover wounds on the hands and arms.

Never sneeze or cough on clean crockery or baskets for sterile equipment.

7.3 Cleaning and Care

The appliance should be cleaned daily with a damp cloth or usual cleaning agents. Dry well the appliance after carrying out wet cleaning, in order to prevent the development of mould, uncontrolled growth of germs and bacteria and, consequently, contamination of the appliance.

7.4 Special Care Instructions

The resistance to corrosion of stainless steels is based on a passive layer which is formed on the surface when oxygen is admitted. The oxygen in the air is sufficient for the formation of the passive layer, so that faults or damage to the passive layer can be remedied again automatically by mechanical action.

The passive layer develops or reforms more quickly when the steel comes into contact with flowing water containing oxygen. The passive layer can be chemically damaged or disrupted by agents having a reducing (oxygen-consuming) action when the steel comes into contact with them in concentrated form or at high temperatures.

Such aggressive substances are for example:

- substances containing salt and sulphur
- chlorides (salts)
- seasoning concentrates (e.g. mustard, vinegar essence, seasoning cubes, saline solutions)

Further damages can occur due to:

- extraneous rust (e.g. from other components, tools or rust film)
- iron particles (e.g. grinding dust)
- contact with non-ferrous metals (element formation)
- lack of oxygen (e.g. no admission of air, low-oxygen water).

General working principles for the handling of appliances made of "refined stainless steel":

- Always keep the surface of appliances made from stainless steel clean and accessible to the air.
- Use cleaning agents suitable for stainless steel. No bleaching and chloride-containing cleaning agents should be used.

- Remove layers of lime scale, grease, starch and egg-white daily by cleaning. Corrosion can occur underneath these layers due to lack of air admission.
- After each cleaning operation remove all cleaning agent residues by rinsing thoroughly with copious fresh water. Afterwards, the surface should be thoroughly dried.
- Do not bring parts made from stainless steel into contact with concentrated acids, seasonings, salts etc. for longer than is absolutely necessary. Acid fumes which generate during cleaning of tiles also promote the corrosion of "refined stainless steel".
- Avoid damaging the surface of the stainless steel, particularly by metals other than stainless steel.
- Residues of extraneous metals produce extremely small amounts of chemical elements which can cause corrosion. In any case, contact with iron and steel should be avoided because that leads to extraneous rust. If stainless steel comes into contact with iron (steel wool, steel particles from pipes, water containing iron), this can be a trigger for corrosion. Therefore, for mechanical cleaning use exclusively refined steel wool or brushes with natural, plastics or refined steel bristles. Steel wool or brushes with unalloyed steel lead to extraneous rust due to abrasion.

8 Spare Parts and Accessories

8.1 Introduction

Service work should only be carried out by authorised specialist staff.

Defective components should only be replaced with original parts.

In the event of after-sales service and when ordering spare parts specify always the data and corresponding part number given in the rating plate.

8.2 Spare Parts and Accessories List

Spare part, part number	Item designation	Type	Q-ty
014000401	Swivel caster	∅ 125 mm, screw plate, plastic housing	2
014000402	Swivel caster with total brake	∅ 125 mm, screw plate, plastic housing	2
091010963	Push bars	left and right, complete	1
014002110	Corner bumpers	shock-resistant plastic	2
014003211	Mushroom-head screw	M5 x 10 A2	
014055088	Tension spring	Stainless steel, 20g (0.18oz)	8
014040101	Tension spring	Stainless steel, 10g (0.18oz)	4